CLAIM AMENDMENTS

1. (currently amended) A sample holder for use with an infrared spectrophotometer or infrared filtometer that analyzes a sample through which infrared light is transmitted comprising a mounting means comprised of a first material having an aperture formed therein, an infrared light transmitting sample supporting substrate being present in the aperture comprised of a second material allowing infrared light to pass therethrough without the infrared light transmitting sample supporting substrate or any other material within the aperture substantially absorbing infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate being formed by one or more of the steps comprising cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling and wherein said infrared light transmitting sample supporting substrate has not been precision optically polished.

2. (previously presented) The sample holder as defined in claim 1 wherein the infrared light transmitting sample supporting substrate is mounted in the holder such that the perimeter of the aperture frames all or a centrally located part of said infrared light transmitting sample supporting substrate to form an unimepeded path for infrared light to pass through the infrared light transmitting sample supporting substrate.

Claims 3-9. (canceled)

10. (previously presented) The sample holder as defined in claim 1 wherein said infrared light transmitting sample supporting substrate is an alkali halide crystal.

11. (previously presented) The sample holder as defined in claim 1 wherein said infrared light transmitting sample supporting substrate is an alkali halide crystal selected from the group consisting of KBr, NaCl and KCl.

12. (previously presented) The sample holder as defined in claim 1 wherein said infrared light transmitting sample supporting substrate is comprised of a silica material.

13. (previously presented) The sample holder as defined in claim 1 wherein said infrared light transmitting sample supporting substrate is comprised of a glass composition of germanium, arsenic and selenium.

14. (previously presented) The sample holder as defined in claim 1 wherein said infrared light transmitting sample supporting substrate is comprised of a glass composition of germanium, antimony and selenium.

15. (currently amended) The sample holder as defined in claim 2 further having an infrared light transmitting cover slide window formed by one or more of the steps comprising cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling.

16. (previously presented) The sample holder as defined in claim 15 wherein a spacer is located between said infrared light transmitting sample supporting substrate and said infrared light transmitting cover slide window to create a predetermined space therebetween.

17. (previously presented) The sample holder as defined in claim 15 wherein said infrared light transmitting cover slide window is affixed to said infrared light transmitting sample supporting substrate by a clamping means.

18. (currently amended) A method for the manufacture of a sample holder for use in an infrared spectrophotometer or infrared filtometer, said method comprising the steps of:

providing a mounting means comprised of a first material having an aperture therethrough;

providing an infrared light transmitting material,

forming an infrared light transmitting sample supporting substrate of a second material having infrared light transmissive properties such that the substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate being formed by cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling material from said infrared light transmitting material without

precision optical polishing of the infrared light transmitting material to form an infrared light transmitting sample supporting substrate that allows the passage of infrared light therethrough;

positioning the infrared light tranmitting sample supporting substrate within the aperture so as to allow infrared light to pass through the aperture and the infrared light transmitting sample ~~suporting~~ supporting substrate and with no other material within the aperture that absorbs infrared light.

19. (previously presented) A method for the manufacture of a sample holder as defined in claim 20 wherein said step of providing a mounting means having an aperture comprises providing a disposable card or demountable card.

20. (previously presented) A method for the manufacture of a sample holder as defined in claim 18 further including the step of:

mounting the infrared light transmitting sample supporting substrate to the holder in a position wherein all or a centrally located part of the infrared light transmitting sample supporting substrate is framed by the perimeter of said aperture.

Claims 21-27. (canceled)

28. (previously presented) A method for the manufacture of a sample holder as defined in claim 18 further including the step of affixing an infrared light transmitting cover slide window to the infrared light transmitting sample supporting substrate to provide a means of sandwiching a sample between said infrared light transmitting cover slide window and said infrared light transmitting sample supporting substrate.

29. (canceled)

30. (currently amended) A method for using a sample holder in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing an infrared light transmitting material,

providing an infrared light transmitting sample supporting substrate comprised of a first material having infrared light transmissive properties such that the infrared light transmitting substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate being formed by cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling the infrared light transmittng sample supporting substrate from said infrared light transmitting material without precision optical polishing of the infrared light transmitting sample supporting substrate,

providing a mounting means comprised of a second material having at least one aperture adapted to fit within the spectrophotometer or filtometer, said mounting means being formed so as to be capable of orienting the infrared light transmitting sample supporting substrate in the path of the infrared light emitted by an infrared spectrophotometer or filtometer,

mounting the infrared light transmitting sample supporting substrate to the mounting means in a position where all or a centrally located part of the infrared light transmitting sample supporting substrate is framed by the perimeter of the at least one aperture,

placing a sample to be analyzed onto the infrared light transmitting sample supporting substrate,

inserting the holder into the spectrophotometer or filtometer between the infrared light source and the infrared light detector with the at least one aperture aligned with the infrared light emitted by the infrared light source to allow the passage of infrared light though the sample, the infrared light transmitting sample supporting substrate and the aperture and no other material within said aperture other than the sample that absorbs infrared light.

31. (previously presented) A method as defined in claim 30 wherein said step of providing a mounting means comprises providing a card made of a disposable material.

32. (previously presented) A method as defined in claim 31 wherein said step of providing an infrared light transmitting material comprises providing an alkali halide crystal material.

33. (previously presented) A method as defined in claim 32 wherein said step of providing an infrared light transmitting material comprises providing a material selected from the group consisting of KBr, NaCl and KCl

34. (canceled)

35. (currently amended) A method as defined in claim 31 wherein said step of providing a mounting means further comprises the step of affixing an infrared light transmitting cover slide window to the infrared light transmitting sample supporting substrate to form a means of sandwiching a sample between said infrared light transmitting cover slide window and said infrared light transmitting sample supporting substrate, said infrared light transmitting cover slide window being formed by one or more of the steps comprising cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling without precision optical polishing of the infrared light transmitting cover slide window.

36. (previously presented) A method as defined in claim 35 wherein said step of placing a sample to be analyzed comprises sandwiching the sample between the infrared light transmitting cover slide window and the infrared light transmitting sample supporting.

37. (previously presented) A method as defined in claim 36 wherein said step placing a sample to be analyzed comprises placing a bacterial colony between said infrared light transmitting cover slide window and said infrared light transmitting sample supporting substrate.

38. (canceled)

39. (currently amended) A method for using a sample holder for use in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing a mounting means comprised of a first material having a plurality of apertures adapted to fit within said infrared spectrophotometer or infrared filtometer, said

mounting means being formed so as to be capable of orienting the apertures in the path of the infrared light emitted by an infrared spectrophotometer or filtometer,

providing an infrared light transmitting material,

forming a plurality of infrared light transmitting sample supporting substrates comprised of a second material having infrared light transmissive properties such that the substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate being formed by cleaving, fly cutting, chipping, milling, ~~sawing~~ or scaling said infrared light transmitting sample supporting substrates from said light transmitting material without precision optical polishing of the infrared light transmitting sample supporting substrates,

mounting one of said plurality of said infrared light transmitting sample supporting substrates to the mounting means in a position wherein all or a centrally located part of one of said infrared light transmitting sample supporting substrates is framed by the perimeter of at least one of the apertures,

placing a sample to be analyzed onto at least one of the infrared light transmitting sample supporting substrates,

inserting the holder having the infrared light transmitting sample supporting substrate mounted thereto into said infrared spectrophotometer or infrared filtometer between the infrared light source and the infrared light detector with at least one of the apertures aligned with the infrared light emitted by the infrared light source to allow the passage of a beam of infrared light though one or more samples, said infrared light transmitting sample supporting substrates and apertures and no other material other than the sample within said aperture that absorbs infrared light.

40. (previously presented) A method for using a sample holder as defined in claim 39 wherein said step of forming a plurality of apertures and infrared light transmitting sample supporting substrates mounted thereon comprises forming the plurality of apertures and infrared light transmitting sample supporting substrates in a carousel configuration.

41. (previously presented) A method for using a sample holder as defined in claim 40 wherein said step of placing a sample to be analyzed comprises placing a plurality of

samples onto said plurality of infrared light transmitting sample supporting substrates and said infrared spectrophotometer or infrared filtometer passes infrared light sequentially through said plurality of samples, said infrared light transmitting sample supporting substrates and said apertures and no other material within said apertures that absorbs infrared light.

42. (previously presented) A method for using a sample holder as defined in claim 40 wherein said step of placing a sample onto at least one of the infrared light transmitting sample supporting substrates comprises placing a bacterial colony onto said at least one infrared light transmitting sample supporting substrate.

43. (previously presented) A method for using a sample holder as defined in claim 40 wherein said step of inserting the holder having the infrared light transmitting sample supporting substrate mounted thereto into the infrared spectrophotometer or infrared filtometer comprises inserting the holder in a horizontal position within the infrared spectrophotometer or infrared filtometer and passing a beam of infrared light at least once through the sample, the infrared light transmitting sample supporting substrates and the aperture.

44. (previously presented) A method for using a sample holder as defined in claim 43 wherein the beam of infrared light is passed at least once through the sample by means of reflection.

45. (currently amended) A method for using a sample holder for use in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing a plurality of mounting means comprised of a first material, each having at least one aperture, each of said mounting means being formed so as to be capable of orienting the at least one aperture in the path of the infrared light emitted by an infrared spectrophotometer or filtometer

providing an infrared light transmitting material,

forming a plurality of infrared light transmitting sample supporting substrates comprised of a ~~secnd~~ second material having infrared light transmissive properties such that the

infrared light transmitting substrates do not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrates formed by cleaving, fly cutting, chipping, milling, ~~sawing~~ or scaling infrared light transmitting sample supporting substrates from said infrared light transmitting material without precision optical polishing of the infrared light transmitting sample supporting substrates,

mounting one of said plurality of infrared light transmitting sample supporting substrates to each of said plurality of mounting means in a position wherein all or a centrally located part of said sample supporting mounting means is framed by the perimeter of an apertures,

providing a mechanical carousel adapted to fit into the infrared spectrophotometer or infrared filtometer,

mounting said plurality of mounting means onto the mechanical carousel,

placing a sample to be analyzed onto at least one of the infrared light transmitting sample supporting substrates,

inserting the carousel into the infrared spectrophotometer or infrared filtometer between the infrared light source and the infrared light detector with the at least one aperture aligned with the infrared light emitted by the infrared light source to allow the passage of infrared light in a sequential manner through the plurality of infrared light transmitting sample supporting substrates, said samples and said apertures and no other material other that the samples within said throughbores that absorb infrared light.

46. (currently amended) A method for using a sample holder in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing an infrared light transmitting material,

providing an infrared light transmitting sample supporting substrate comprised of a second material having infrared light transmissive properties such that the infrared light transmitting sample supporting substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate formed by cleaving, fly cutting, chipping, milling, ~~sawing~~ or scaling the

infrared light transmitting sample supporting substrate from said infrared light transmitting material without precision optical polishing of the infrared light transmitting sample supporting substrate,

providing a mounting means comprised of a first material having at least one aperture adapted to fit within the infrared spectrophotometer or infrared filtometer, said holder being formed so as to be capable of orienting the at least one aperture in the path of the infrared light emitted by an infrared spectrophotometer or filtometer,

mounting the infrared light transmitting sample supporting substrate to the mounting means in a position wherein all or a centrally located part of the infrared light transmitting sample supporting substrate is framed by the perimeter of the at least one aperture,

inserting the holder into the infrared spectrophotometer or infrared filtometer to allow the passage of a beam of infrared light though the infrared light transmitting sample supporting substrate to obtain one or more ~~a~~ background scans of the absorbance of the infrared light transmitting sample supporting supporting substrate,

placing a sample to be analyzed onto the infrared light transmitting sample supporting substrate,

inserting the holder into the infrared spectrophotometer or infrared filtometer between the infrared light source and the infrared light detector with the at least one aperture aligned with the infrared light emitted by the infrared light source to allow the passage of infrared light though the infrared light transmitting sample suporting substrate and the sample located thereon and with no other material within said at least one aperture that absorbs infrared light to obtain a scan of the absorbance of the sample and the infrared light transmittting sample supporting substrate, and,

using the one or more background scans to subtract the background absorbance of the infrared light transmitting sample supporting substrate without the sample from the absorbance of the sample and the infrared light transmitting sample supporting substrate.

47. (currently amended) A method for using a sample holder in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing an infrared light transmitting material,

providing an infrared light transmitting sample supporting substrate comprised of a second material having infrared light transmissive properties such that the infrared light transmitting sample supporting substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate formed by cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling the infrared light transmitting sample supporting substrate from said infrared light transmitting material without precision optical polishing of the infrared light transmitting sample suporting substrate,

providing a mounting means comprised of a first material having at least one aperture adapted to fit within the infrared spectrophotometer or infrared filtometer, said mounting means being formed so as to be capable of orienting the infrared light transmitting sample supporting substrate in the path of the infrared light emitted by the infrared spectrophotometer or filtometer,

mounting the infrared light transmitting sample supporting substrate to the mounting means in a position wherein all or a centrally located part of the infrared light transmitting sample supporting substrate is framed by the perimeter of the at least one aperture,

placing a medium onto the infrared light transmitting sample supporting substrate with which a sample will be mixed,

inserting the holder into the infrared spectrophotometer or infrared filtometer to allow the passage of a beam of infrared light though the medium and the infrared light transmitting sample supporting substrate to obtain one or more a background scans of the infrared light transmitting sample supporting substrate and the medium,

placing a sample to be analyzed mixed with the medium onto the infrared light transmitting sample supporting substrate,

inserting the holder into the infrared spectrophotometer or infrared filtometer analytical instrument between the infrared light source and the infrared light detector with the at least one aperture aligned with the infrared light emitted by the infrared light source to allow infrared light though the infrared light transmitting sample supporting substrate and the medium mixed with the sample and with no other material other than the sample within said at least one aperture that absorbs infrared light and,

using the one or more background scans to subtract the absorbances of the medium and the infrared light transmitting sample supporting substrate from the absorbances of the medium, the infrared light transmitting sample supporting substrate and the sample.

48. (previously presented) A method of using a sample holder as defined in claim 47 wherein said step of placing a medium onto the infrared light transmitting sample supporting substrate with which the sample will be mixed comprises placing an alkali halide crystal powder on the infrared light transmitting sample supporting substrate.

49. (previously presented) A method of using a sample holder as defined in claim 48 wherein said step of placing a medium onto the infrared light transmitting sample supporting substrate with which the sample will be mixed comprises placing KBr powder on the infrared light transmitting sample supporting substrate.

50. (previously presented) A method of using a sample holder as defined in claim 47 wherein said step of placing a medium onto the infrared transmitting sample supporting substrate with which the sample will be mixed comprises placing mineral oil on the infrared transmitting sample supporting substrate.

51. (previously presented) A method of using a sample holder as defined in claim 47 wherein said step of placing a medium onto the infrared light transmitting sample supporting substrate with which the sample will be mixed comprises placing a solvent on the infrared light transmitting sample supporting substrate.

52. (previously presented) A method of using a sample holder as defined in claim 47 wherein said step of placing a medium onto the infrared light transmitting sample supporting substrate with which the sample will be mixed comprises placing a mixture of KBr powder and a solvent or a mineral oil on the infrared light transmitting sample supporting substrate.

53. (currently amended) A method for using a sample holder in an infrared spectrophotometer or infrared filtometer having an infrared light source and an infrared light detector, said method comprising the steps of:

providing an infrared light transmitting material,

providing an infrared light transmitting sample supporting substrate comprised of second material having infrared light transmissive properties such that the infrared light transmitting sample supporting substrate does not substantially absorb infrared light within a substantial portion of the infrared spectral range, said infrared light transmitting sample supporting substrate formed by cleaving, fly cutting, chipping, milling~~, sawing~~ or scaling the infrared light transmittng sample supporting substrate from said infrared light transmitting material without precision optical polishing of the infrared light transmitting sample supporting substrate,

providing a mounting means comprised of a first material having at least one aperture adapted to fit within the spectrophotometer or filtometer, said mounting means being formed so as to be capable of orienting the infrared light transmitting sample supporting substrate in the path of the infrared light emitted by an infrared spectrophotometer or filtometer,

mounting the infrared light transmitting sample supporting substrate to the mounting means in a position where all or a centrally located part of the infrared light transmitting sample supporting substrate is framed by the perimeter of the at least one aperture,

placing a bacterial colony to be analyzed onto the infrared light transmitting sample supporting substrate,

inserting the mounting means into the spectrophotometer or filtometer between the infrared light source and the infrared light detector with the at least one aperture aligned with the infrared light emitted by the infrared light source to allow the passage of infrared light though the bacterial colony, the infrared light transmitting sample supporting substrate and the at least one aperture and with no other material other than the bacterial colony within said at least one aperture that absorbs infrared light.